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PATENT APPLICATION
10/734,442

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Helmut Steinhilber et al.
Serial No.:	10/734,442
Date Filed:	December 12, 2003
Group Art Unit:	3653
Confirmation No.:	9668
Examiner:	Joerger, Kaitlin S.
Title:	METHOD AND DEVICE FOR SELECTING THE SHEETS OF A RECORD CARRIER FROM A PILE

MAIL STOP – APPEAL BRIEF - PATENTS

COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

REPLACEMENT APPEAL BRIEF

Further to the notice of appeal submitted on March 20, 2007, Applicants hereby submit this appeal brief according to §41.37.

APPELLANT'S BRIEF (37 C.F.R. § 41.37)

This brief is submitted in support of appellants' notice of appeal from the decision dated February 20, 2007 of the Examiner finally rejecting claims 1-3, 5-10, and 14-17 of the subject application.

I. REAL PARTY IN INTEREST

The real party in interest is:

Helmut Steinhilber
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CH-6052 Hergiswil, Switzerland

by virtue of an assignment by the inventors as duly recorded in the Assignment Branch of the U.S. Patent and Trademark Office.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

III. STATUS OF CLAIMS

The application as originally filed contained a total of 17 claims. Claims 1, 6 and 17 are independent. The status of the claims are as follows:

Claims Pending:	1-3, 5-10, and 14-17
Claims Rejected:	1-3, 5-10, and 14-17
Claims Allowed:	None
Claims Amended:	1, 6, 10, and 17
Claims Cancelled:	None
Claims Withdrawn:	4, and 11-13
Claims Objected:	None

Appellants appeal the rejection of claims 1-3, 5-10, and 14-17 of the present application. These claims are reproduced in Appendix A.

IV. STATUS OF AMENDMENTS

Applicants withdrew Claims 4, and 11-13 in response to an Election/Restriction Requirement filed on October 17, 2005. Applicants amended Claims 1, 6, 10 and 17 in a Response to Office Action filed March 15, 2006, and further amended Claims 1, 6 and 17 in a Response to Office Action filed September 13, 2006. No further claim amendments were submitted.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Independent claim 1 recites a method for selecting the sheets of a record carrier from a pile in order to feed them to an office machine or a printer. The uppermost sheet (12) of the pile (10) (*see* 8:13-20; Figs. 1 & 2) is subjected to a rolling action, through which the uppermost sheet (12) is loosened from the next sheet on the pile (10) and is moved in the feeding direction so that the front edge of the uppermost sheet (12) is moved against a stop (22, 24, 26, 38) (*see* Fig. 1, 9:3-11; 13:7-13). The stop is moved along a line that is at an impingement angle of more than 90 degrees in relation to the feeding direction. (*see* Figs 1-4; 9:23-10:11; Figs. 5-8; 13:6-13). According to the method, the front edge of the uppermost sheet is picked up and lifted away from the next sheet in the pile. (*see* Figs 2-3; 11:8-19).

Independent claim 6 recites a device for selecting sheets of a record carrier from a pile in order to feed them to an office machine or a printer. The device has a rolling action device (14) that lies on the uppermost sheet (12) of the pile (10) and exerts a rolling action on the uppermost sheet (12) to move the uppermost sheet in a feeding direction. (*see* 9:3-11; 13:7-13). A stop (22, 24, 26, 38) is mounted before the front edge of the pile pointing in the feeding direction (*see* 9:3-11), wherein the front edge of the uppermost sheet (12) is moved against the stop (22, 24, 26) by the rolling action device (14). The stop moves upwards at an impingement angle of more than 90 degrees in relation to the feeding direction. (*see* Figs 1-4; 9:23-10:11; Figs. 5-8; 13:6-13).

Independent claim 17 recites a device for selecting sheets of a record carrier from a pile in order to feed them to an office machine or a printer. The device has a rolling action device (14) that lies on the uppermost sheet (12) of the pile (10) and exerts a rolling action on the uppermost sheet (12) to move the uppermost sheet in a feeding direction. (*see* 9:3-11; 13:7-13). A stop (22, 24, 26, 38) is mounted before the front edge of the pile (10) pointing in the feeding direction so that the front edge of the uppermost sheet (12) is moved against the stop by the rolling action device. The stop (22, 24, 26) can be moved upwards at an impingement angle of more than 90 degrees in relation to the feeding direction. (*see* Figs 1-4; 9:23-10:11; Figs. 5-8; 13:6-13). A dividing element (28) can be moved between the front edge of the uppermost sheet (12) moving upwards at the stop (22, 24, 26, 38) and the front edge of the following second sheet. The at least one dividing element is mounted before the front edge of the pile pointing towards the front edge of the pile that can be moved between the uppermost sheet and the following second sheet (20). A press-on roller (36) is mounted on the at least one dividing element (28), which presses the uppermost sheet (12) against a driven pull-off roller (34) when the dividing element (28) is between the uppermost sheet (12) and the next sheet (20). (*See* 12:1-15; Fig. 4; 13:15-22; Fig. 8).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Rejections under 35 U.S.C. § 102

Claims 6-10 stand rejected by the Examiner under 35 U.S.C. §102(b) as being anticipated by JP 62240237 A filed by Kawamoto Takahiro et al. ("Takahiro").

Rejections under 35 U.S.C. §103

Claims 1-3, 5 and 14-17 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Takahiro and/or Frost.

VII. ARGUMENT

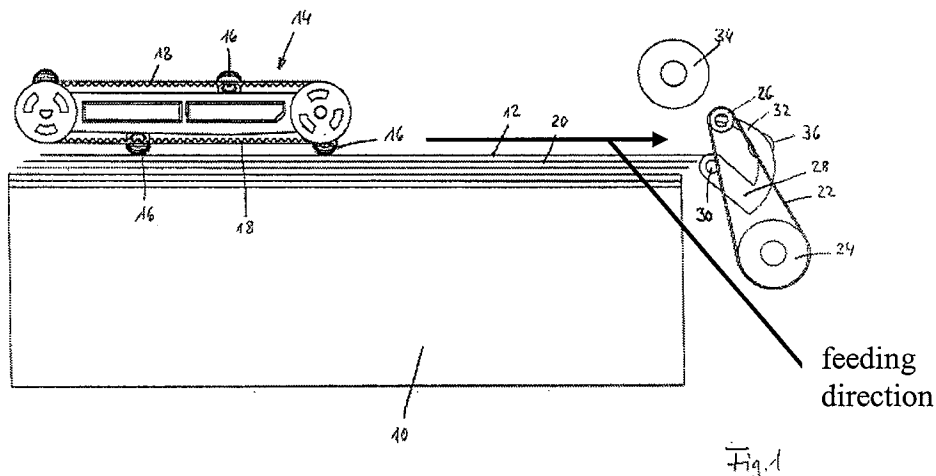
Arguments to Rejections under 35 U.S.C. § 102

Claim 6 recites "the stop can be moved upwards at an impingement angle of *more than 90 degrees in relation to a flat plane and a direction in which the uppermost sheet is fed.*" (emphasis added). According to the specification,

In order to put this effect to use, the impingement angle of the stop in relation to the flat plane of the fed sheet should be at least 90 degrees. An impingement angle of more than 90 degrees, most advantageously about 100 degrees, or setting the stop in a *slightly tilted position in relation to the pile*, has the advantage that the front edge of the sheet will be maintained contiguous with the stop also when the front edge of the sheet moves upwards in a bow-shaped form.
(Specification, 6:26-7:3) (emphasis added). The specification clearly teaches and claim 6 recites that the stop is positioned at an angle relative to a flat plane parallel to the pile of paper. With reference to Figure 1, the specification teaches,

On the pile 10 there is a rolling action device 14, which corresponds to the rolling action device described, for instance, in DE 100 16 793 A1. This rolling action device 14 has rolling elements that are built as freely revolvable bearing housed turning rollers 16. These turning rollers 16 are embedded onto an endlessly running tractive device 18. The turning rollers 16 are moved in *the feeding direction by the driven tractive device 18, or in the figure, to the right over the uppermost sheet 12 of the pile 10.*

(Specification at 8:21-9:2) (emphasis added).

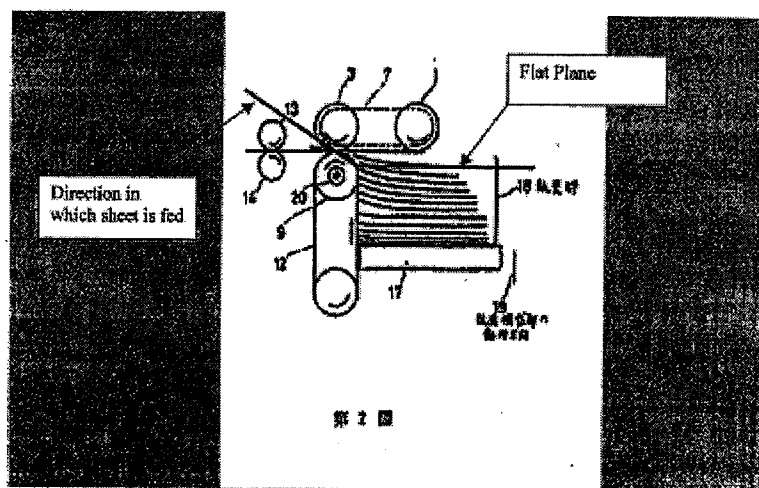


(Specification at Figure 1) (notations added).

The continuously running turning rollers 16 push this curvature in front of themselves, whereby *a feeding force is being exercised in direction to the right on the uppermost sheet 12* and in a decreasing degree on each of the following sheets in the pile 10. In this way, the upper sheets of the pile 10 are fanned out in the form of scales as this can be seen in Figure 1.

(Specification at 8:21-9:2) (emphasis added). The feed direction is horizontally to the right in Figure 1.

A premise of the rejection is that Takahiro illustrates that the direction in which the sheet is fed has a vertical component so that the feed direction is inclined approximately 40 degrees from horizontal.



(OA at 3). It should be noted, however, that in the context of the claims and specification of the present invention, the "paper sheet placing unit 17" of Takahiro is the device upon which the pile of paper sits in a horizontal position. The sheets of paper are in the horizontal position when they are engaged by the "drawing belt 12." Further, when the individual sheets are fed from the

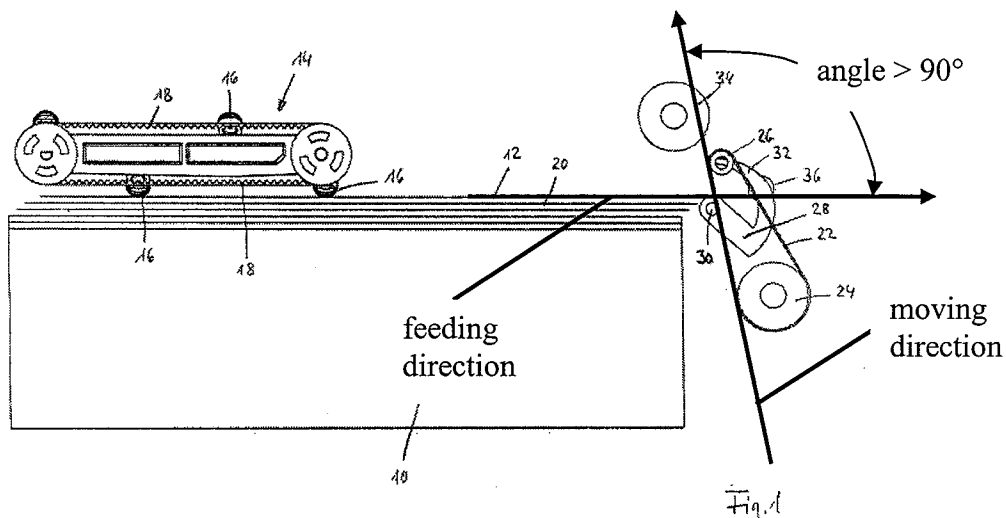
Fig. 2

A fine dislocation is caused among the respective paper sheets in the group of the paper sheets 18 and a larger dislocation is caused at the upper portion by the same force as compared with the lower portion due to the effect of the weight of the

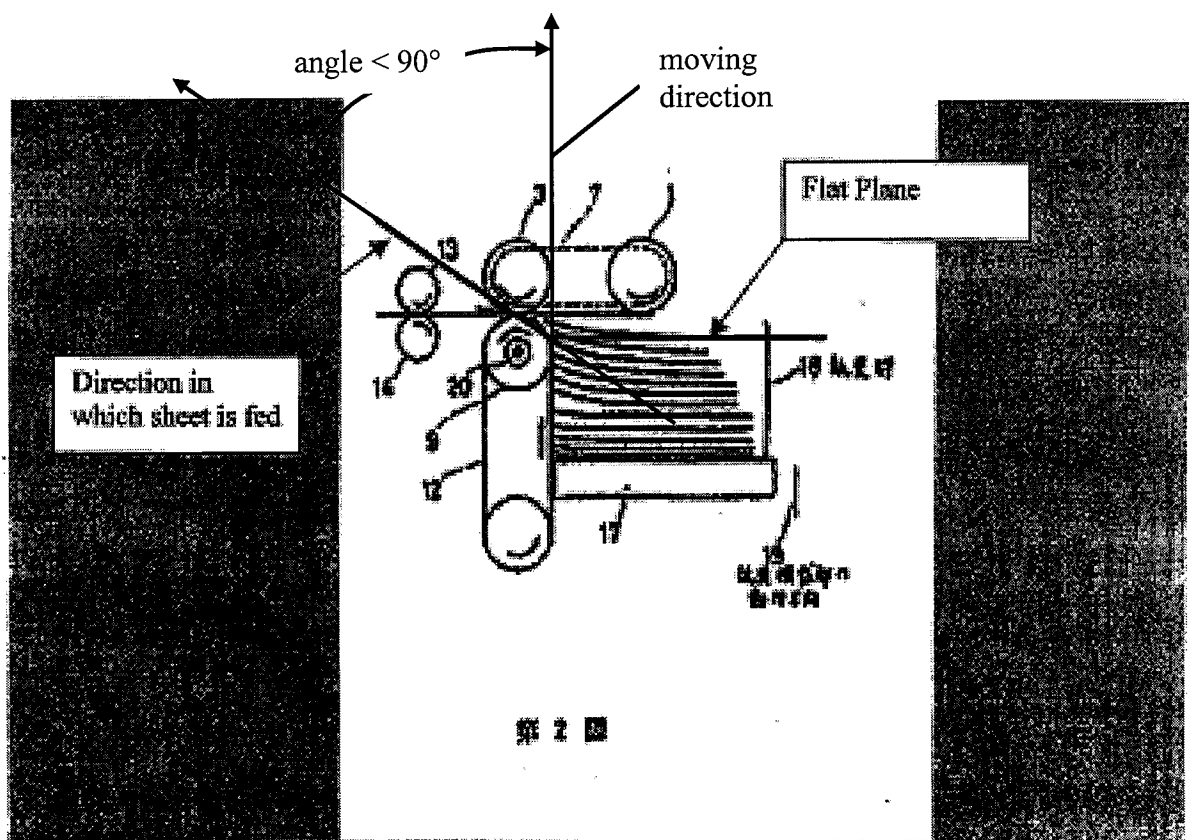
respective paper sheets as far as the entire group of the paper sheet 18 is concerned.

(Takahiro, abstract). Takahiro teaches an impingement angle of 90 degrees so as to apply the same contact force with all of the papers in the paper stack. With the same contact force being applied to the entire stack, only the top paper sheets become dislocated because they are not weighted down by additional paper sheets. According to Takahiro the stack of paper sheets is moved with its front side completely against the drawing belt 12 by the placing unit 17. Only in this way all the paper sheets can be lifted at their front edges by the belt 12 (in a different amount due to the effect of the weight of the papers of the upper part of the stack). Roller 1 does not contact the uppermost sheet of the stack (as can be seen from Figs. 1 and 2 of Takahiro) but drives roller 3. Thus, Takahiro teaches away from an impingement angle of more than 90 degrees. The invention as claimed in claim 6 is patentable in view of Takahiro. The invention of claims 7-10 is patentable for similar reasons.

Further, if the feed direction identified in the Office Action were accepted as correct, a premise with which the applicants do not agree, then the angle between the feed direction and the moving direction of the stop belt would be less than 90°, not greater than 90° as required by the claims. As noted above, claim 6 recites “the stop can be moved upwards at an impingement angle of *more than 90 degrees in relation to a flat plane and a direction in which the uppermost sheet is fed.*” (emphasis added). The relative directions are illustrated with respect to Figure 1.



(Specification at Figure 1) (notations added). Alternatively, if the feeding direction adopted as a premise of the rejection is adopted, the impingement angle is less than 90° as illustrated below.



Therefore, if the feed direction adopted as a premise of rejection were taken as correct, the result is that the impingement angle is less than 90° . Under that interpretation of the claims, the prior art fails to teach all of the claim elements. For this additional reason, the invention as claimed in claim 6 is patentable in view of Takahiro. The invention of claims 7-10 is patentable for similar reasons.

Arguments to Rejections under 35 U.S.C. §103

Similar to the discussion above relative to the invention as claimed in claim 6, this “feed direction” is the horizontal direction to the right as shown in Figure 1 of the specification. Thus, the invention as claimed in claims 1-3, 5 and 14-17 is patentable in view of Takahiro and U.S. Patent 4,579,329 issued to Walter W. Frost et al. (“Frost”). .

Regarding the rejection of Claims 1-3 under 35 U.S.C. §103(a) as being unpatentable over Takahiro, Applicants respectfully traverse and submit the cited art does not render the claimed embodiments of the invention obvious. Claim 1 recites, “subjecting the uppermost sheet of the pile to a rolling action, through which the uppermost sheet is loosened from the next sheet on the pile and is *moved in the feeding direction*, moving the uppermost sheet with its front edge against a stop, which is moved under an impingement angle of more than 90 degrees in relation to a flat plane and a *direction, in which the uppermost sheet is being fed.*” As noted above, the specification clearly teaches that the feeding direction is horizontally to the right in Figure 1. This holds true even though the leading edge of the sheet is lifted after engagement with the stop as illustrated in figure 2 of the specification. A premise of the rejection is that the feeding direction is that of the leading edge of the paper after it is lifted by the stop. However, as noted above, that premise is incorrect in view of the clear claim language and the express teaching of the specification. Further, if the feeding direction identified in the office action were taken as correct, a premise with which the applicants do not agree, then Takahiro fails to teach an impingement angle of more than 90°. Takahiro fails to teach or suggest the invention as claimed in claim 1. The invention as claimed in claims 2-3 is patentable for similar reasons.

Regarding the rejection of Claim 5 under 35 U.S.C. §103(a) as being unpatentable over Takahiro in view of Frost, Applicants respectfully traverse and submit the cited art combinations, even if proper, which Applicants do not concede, does not render the claimed embodiment of the invention obvious. For the reasons noted herein, the invention as claimed in claim 5 is patentable in view of Takahiro and Frost.

Regarding the rejection of Claims 14-17 under 35 U.S.C. §103(a) as being unpatentable over Takahiro in view of Frost, Applicants respectfully traverse and submit the cited art combinations, even if proper, which Applicants do not concede, does not render the claimed embodiment of the invention obvious. For the reasons noted herein, the invention as claimed in claim 14-16 is patentable in view of Takahiro and Frost. Claim 17 recites "a rolling action device that lies on the uppermost sheet of the pile and exerts a rolling action on the uppermost sheet in a feeding direction." Similar to the discussion above relative to the invention as claimed in claims 1 and 6, this "feed direction" is the horizontal direction to the right as shown in Figure 1 of the specification. Thus, the invention as claimed in claim 17 is patentable in view of Takahiro and Frost.

SUMMARY

Applicants believe that the prior art cited do not render the independent claims obvious. Applicants respectfully submit that the dependent Claims are allowable at least to the extent of the independent Claim to which they refer, respectively. Thus, Applicants respectfully request reconsideration and allowance of the dependent Claims.

Applicants believe not fees are due, however, the Commissioner is authorized to charge any fees necessary to Deposit Account No. 50-2148 of Baker Botts L.L.P. to effectuate this filing.

Date: August 6, 2007

SEND CORRESPONDENCE TO:


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Respectfully submitted,
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VIII. CLAIMS APPENDIX

Claims:

1. (Previously Presented) A method for selecting the sheets of a record carrier from a pile in order to feed them to an office machine or a printer, comprising the steps:

subjecting the uppermost sheet of the pile to a rolling action, through which the uppermost sheet is loosened from the next sheet on the pile and is moved in the feeding direction;

moving the uppermost sheet with its front edge against a stop, which is moved under an impingement angle of more than 90 degrees in relation to a flat plane and a direction, in which the uppermost sheet is being fed; and

picking up the front edge of the uppermost sheet and lifting it away from the next sheet.

2. (Original) The method according to Claim 1, wherein the stop is moved essentially in the plane of its surface.

3. (Original) The method according to Claim 2, wherein the stop is formed by at least one belt that is running upwards under the impingement angle.

4. (Withdrawn) The method according to Claim 1, wherein the stop is formed by a slider that is moving upwards under the impingement angle.

5. (Original) The method according to Claim 1, wherein a dividing element is moved between the lifted front edge of the uppermost sheet and the next sheet in the pile.

6. (Previously Presented) A device for selecting sheets of a record carrier from a pile in order to feed them to an office machine or a printer, comprising a rolling action device that lies on the uppermost sheet of the pile and exerts a rolling action on the uppermost sheet in [the]a feeding direction, a stop mounted before the front edge of the pile pointing in the feeding direction, wherein the front edge of the uppermost sheet is moved against the stop and wherein the stop can be moved upwards at an impingement angle of more than 90 degrees in relation to a flat plane and a direction in which the uppermost sheet is fed.

7. (Original) The device according to Claim 6, wherein the pile stop can essentially move in the plane of its surface.

8. (Original) The device according to Claim 7, wherein the impingement angle is between 90 and 100 degrees.

9. (Original) The device according to Claim 6, wherein the stop is built of at least one belt, which runs upwards under the impingement angle.

10. (Previously Presented) The device according to Claim 9, wherein at least one belt is a belt that can run endlessly and whose planar surface is turned towards the pile upwards and is running upwards under the impingement angle.

11. (Withdrawn) The device according to Claim 6, wherein the stop is built with at least one slider, which can be moved upwards basically in a linear manner under the impingement angle.

12. (Withdrawn) The device according to Claim 11, wherein the slider has at least one step, which picks up the front edge of the uppermost sheet.

13. (Withdrawn) The device according to Claim 11, wherein a sensor detects the contact of the front edge of the sheet with the slider and starts the driving of the slider.

14. (Original) The device according to Claim 6, wherein a dividing element can be moved between the front edge of the uppermost sheet moving upwards at the stop and the front edge of the following second sheet.

15. (Original) The device according to Claim 14, wherein the at least one dividing element is mounted before the front edge of the pile pointing towards the front edge of the pile that can be moved between the uppermost sheet and the following second sheet.

16. (Original) The device according to Claim 15, wherein the dividing element intervenes by means of a finger between the uppermost sheet and the following second sheet and holds down the second sheet.

17. (Previously Presented) A device for selecting sheets of a record carrier from a pile in order to feed them to an office machine or a printer, comprising a rolling action device that lies on the uppermost sheet of the pile and exerts a rolling action on the uppermost sheet in a feeding direction, a stop mounted before the front edge of the pile pointing in the feeding direction, wherein the front edge of the uppermost sheet is moved against the stop and wherein the stop can be moved upwards at an impingement angle of more than 90 degrees in relation to a flat plane and a direction in which the uppermost sheet is fed, wherein a dividing element can be moved between the front edge of the uppermost sheet moving upwards at the stop and the front edge of the following second sheet, wherein the at least one dividing element is mounted before the front edge of the pile pointing towards the front edge of the pile that can be moved between the uppermost sheet and the following second sheet, wherein a press-on roller is mounted on the at least one dividing element, which presses the uppermost sheet against a driven pull-off roller when the dividing element between the uppermost sheet and the next sheet.

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IX. EVIDENCE APPENDIX

NONE

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X. RELATED PROCEEDINGS APPENDIX A

NONE